

Maxeler Real Time Risk on AWS F1



“The purpose of computing is insight, not numbers”, R.W. Hamming

Data Solutions

Maxeler Real Time Risk (Maxeler RTR) is a suite of Finance Risk tools and components, including CVA, Margin Requirements (ISDA SIMM and CME Clearing) but also a full derivatives pricing library, driven by Bloomberg market data and the customer trades in FPML format. Maxeler RTR can run on CPU cloud instances or for ultrafast real time purposes on AWS F1 instances. It is available both on the Cloud and on-premise with Maxeler's MAX5 product generation which is fully compatible with the Amazon F1 instances. Maxeler RTR is ideal for building your own solutions for FRTB, CCR and extended scenario analysis in house or on AWS. RTR comes with complete dashboards as well as an optional API based library with full source code.

In the last few years, the financial industry has been under increasing pressure to correctly price and manage counterparty risk, funding, collateral and capital in over-the-counter derivatives. These aspects are generally known via the Credit Value Adjustment (CVA). With its RTR module for pre-trade CVA on AWS, Maxeler brings the capability of real-time incremental calculations in order to rapidly price costs (and benefits). This will help customers to make the transition from overnight CVA to pre-trade CVA computations and address the tightening of profit margins in some markets and the pressure for accurate and real-time pricing. This is further complicated by the fact that valuation adjustments are, in general, portfolio level quantities which presents a large challenge in terms of data and calculation workload. Maxeler CVA on AWS F1 allows customers make near real-time assessments of the following:

- New transaction pricing;
- Novations;
- Restructurings and unwinds;
- Backloading to a central counterparty; and
- CSA changes.

Maxeler RTR's Margin Requirements module on AWS F1 will help customers with rapid comparison of initial margin requirements for interest-rate swaps between ISDA SIMM and CME Clearing models. Both margin requirements above are computed at the portfolio level, so that offsetting positions can sometimes be netted for a diversification benefit. In summary:

- CME margin requirements under normal market conditions can be as low as 40% of SIMM;
- SIMM requirements change only at the annual re-calibration, while CME requirements can spike during periods of high market volatility;
- CME's portfolio-based risk approach offers more opportunities to take diversification benefits than SIMM, particularly across currencies, and central clearing allows for further beneficial netting of positions, which might otherwise be traded with separate counterparties.

Maxeler Dataflow computing powered solutions as applied to AWS F1 instance bring real-time risk computations, competitive advantage and higher efficiency to the finance industry on AWS.